

Appl. No. 10/511,802
Final Amendment and/or Response
Reply to final Office action of 9 February 2007

Reply under 37 CFR 1.116
Expedited Procedure – TC 2838

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Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 (Canceled).

2. (Currently amended) The resonant LLC power converter of claim 1, wherein A resonant LLC power converter comprising at least two transformers, wherein:
primary windings of the at least two transformers are coupled in series,
each one of the at least two transformers includes a secondary winding for
supplying a non-zero current to a common load during a substantially same period of
time,
the first transformer includes a first predetermined number of further
secondary windings for supplying a first total power to associated loads, and
the first total power is less than the power supplied by the secondary winding
of the second transformer to the common load.

3. (Previously presented) The resonant LLC power converter of claim 2, wherein the second transformer includes a second predetermined number of further secondary windings for supplying a second total power to associated loads, wherein both the first total power minus the second total power is less than the power supplied by the secondary winding of the first transformer to the common load, and the second total power minus the first total power is less than the power supplied by the secondary winding of the second transformer to the common load.

4. (Previously presented) The resonant LLC power converter of claim 3, wherein at least one of the first predetermined number of further secondary windings of the first transformer and an associated rectifier is poled for delivering power to at least one of

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the associated loads, during a half wave of a resonance current in the first transformer with a first polarity, and at least one of the predetermined number of further secondary windings of the second transformer and an associated rectifier is poled for supplying power to the at least one of the associated loads during a half wave of a resonant current in the second transformer with a polarity opposite to the first polarity.

5. (Currently amended) The resonant LLC power converter of claim-42, including:
a resonance capacitor, and

a series arrangement of a first electronic switch and a second electronic switch for receiving a direct current input voltage,

the at least two transformers comprising a first transformer having a primary winding and a plurality of secondary windings being coupled via a first rectifier circuit to a load for supplying current to the load during a conductive period of the first rectifier circuit,

a second transformer having a primary winding and a secondary winding being coupled via a second rectifier circuit to the load for supplying current to the load during a conductive period of the second rectifier,

wherein the primary winding of the first transformer, the primary winding of the secondary transformer and the resonance capacitor are arranged in series across the second electronic switch, and

the primary winding of the first transformer and the primary winding of the secondary transformer, and the first rectifier circuit and the second rectifier circuit being poled to obtain a substantially coincidence of the conductive period of the first rectifier circuit and the conductive period of the second rectifier circuit to obtain a first voltage across the primary winding of the first transformer being substantially equal to a second voltage across the primary winding of the secondary transformer during the conductive period of the first rectifier circuit.

6 (Canceled).

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7. (Currently amended) The apparatus of claim-69, wherein the secondary windings are coupled in parallel to supply the non-zero current to the common load.

8. (Currently amended) The apparatus of claim-69, wherein each of the transformers is configured to supply substantial equal non-zero current to the common load.

9. (Currently amended) The apparatus of claim 6, wherein An electronic apparatus comprising a resonant LLC power converter with at least two transformers, wherein:
primary windings of the at least two transformers are coupled in series,
each one of the at least two transformers includes a secondary winding for
supplying a non-zero current to a common load during a substantially same period of
time, and

one or more transformers of the at least two transformers includes one or
more additional secondary windings that are configured to supply non-zero current to
ancillary loads.

10. (Previously presented) The apparatus of claim 9, wherein each transformer of the at least two transformers supplies a total current that is larger than a sum of all the currents to the ancillary loads.

11 (Canceled).

12. (Currently amended) The converter of claim-112, wherein:

a first transformer of the two transformers includes one or more additional
secondary windings that supply power to one or more associated loads of the first
transformer, and

a second transformer of the two transformers includes one or more additional
secondary windings that supply power to one or more associated loads of the second
transformer.

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13. (Previously presented) The converter of claim 12, wherein:

the first transformer provides a first amount of power to the common load, and a second amount of power to the associated loads of the first transformer,

the second transformer provides a third amount of power to the common load, and a fourth amount of power to the associated loads of the second transformer,

the first amount of power is greater than the fourth amount of power, and the third amount of power is greater than the second amount of power.

14. (Currently amended) The converter of claim-1 2, wherein

the two transformers are configured to supply a substantially equal current to the common load.

15. (Previously presented) A resonant LLC power converter comprising:

a resonance capacitor,

a series arrangement of a first electronic switch and a second electronic switch for receiving a direct current input voltage,

a first transformer that includes a primary winding and a secondary winding that is coupled via a first rectifier circuit to a load for supplying current to the load during a conductive period of the first rectifier circuit,

a second transformer that includes a primary winding and a secondary winding that is coupled via a second rectifier circuit to the load for supplying current to the load during a conductive period of the second rectifier,

wherein the primary winding of the first transformer, the primary winding of the secondary transformer and the resonance capacitor are arranged in series across the second electronic switch, and

the primary winding of the first transformer and the primary winding of the secondary transformer, and the first rectifier circuit and the second rectifier circuit being poled to obtain a substantially coincidence of the conductive period of the first rectifier circuit and the conductive period of the second rectifier circuit to obtain a first voltage across the primary winding of the first transformer being substantially equal to

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a second voltage across the primary winding of the secondary transformer during the conductive period of the first rectifier circuit.

16. (Previously presented) The converter of claim 15, wherein the secondary windings of the first and second transformers are configured to supply the current to the load in parallel.

17. (Previously presented) The converter of claim 15, wherein the first transformer includes one or more additional secondary windings that are configured to supply current to one or more ancillary loads.

18. (Previously presented) The converter of claim 17, wherein the second transformer includes one or more additional secondary windings that are configured to supply current to one or more additional ancillary loads.

19. (Previously presented) The converter of claim 18, wherein the first transformer is configured to provide an amount of the current to the load that is greater than an amount of current that the second transformer provides to the one or more additional ancillary loads.

20. (Previously presented) The converter of claim 15, wherein the first and second transformers are configured to supply substantially equal current to the load.